

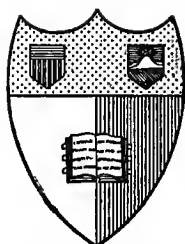
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OF THE

BUREAU OF STANDARDS

S. W. STRATTON, DIRECTOR

No. 10

LEGAL WEIGHTS (IN POUNDS) PER BUSHEL
OF VARIOUS COMMODITIES

(3d Edition)
Issued May 9, 1918

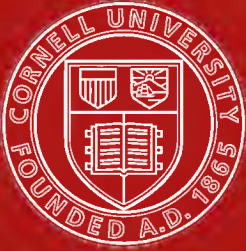


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LEGAL WEIGHTS (IN POUNDS) PER BUSHEL OF VARIOUS COMMODITIES

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I. INTRODUCTION

This circular simply shows the legal weights per bushel of various commodities, as fixed by national legislation mainly for customs purposes, or by State legislation for purposes of commerce within the State. In many cases these weights differ considerably in the different States and in only rare instances, such as wheat, oats, and peas, are the legal weights uniform throughout the entire country. It will be noticed that for some commodities which have, in the natural state, a husk or pod, the weights per bushel in the various States differ from one another by as much as 100 per cent. This wide discrepancy may be explained by the fact that it appears to be the practice in some States with regard to such commodities, to require that quantity for a bushel which, when shelled, or husked and shelled (as the case might be), will make a struck bushel of the commodity, while in other States only that quantity in its natural state, with the husk or pod included, which will fill a bushel measure, is taken for a bushel.

The bushel in customary use in the United States is the Winchester bushel, containing 2150.42 cubic inches. This measure is a heritage from colonial days, being the same measure that was

in use in this country and in England at the time of the Declaration of Independence. It has been officially recognized by Congress by a joint resolution, approved June 14, 1836, which directed the Secretary of the Treasury "to cause a complete set of all weights and measures adopted [by that department] as standards and now either made or in the progress of manufacture for the use of the several customs houses, and for other purposes, to be delivered to the governor of each State in the Union," since among these weights and measures was a Winchester half bushel. It has been adopted as the standard in nearly all the States, since the States as a rule proceeded by acts of their legislatures to adopt as standards for use within the State the measures which were furnished to them by the Government under the terms of the joint resolution mentioned above.

The dimensions of the Winchester bushel are sometimes of importance but these have never been defined by Congress, and on account of the fact that the actual standard furnished the States was a half bushel, we have no official measure from which the linear measurements can be determined. As a result we are obliged to seek the dimensions of the original standard from which ours was derived, since it seems probable that these still govern in the absence of any legislation to the contrary. We find that at the time of the Declaration of Independence a statute, passed in the first year of the reign of Queen Anne, in 1701, was in force, which read in part as follows:

That the measure, commonly called water measure, shall be round, and in diameter eighteen inches and an half within the hoop, and eight inches deep, and no more, and so in proportion for any greater or lesser measure; and that every measure, commonly called water measure, by which apples and pears are sold, shall be heaped as usually * * *.

It appears that Winchester measure was at that time commonly called water measure, and hence the use of this term in the statute just quoted.

As is well known, some commodities are sold by struck measure and others by heaped measure. It is important to ascertain what amounts constitute the struck bushel and what the heaped bushel, and the kinds of commodities required to be sold by each. The former is represented by the United States standard (Winchester) bushel of 2150.42 cubic inches, filled level full, and is used for the measurement of various kinds of grain and commodities of similar size, as well as dried beans, peas, berries, etc. The quantity represented by the heaped bushel has never been

fixed by national legislation. A number of the States, however, have required that some commodities be sold by heaped measure and have described the manner in which the measure should be filled, one of two phraseologies being usually employed in the statutes, namely, "heaped in the form of a cone, the outside of the measure to be the base of the cone, and such cone to be as high as the article will admit," or "heaped as high as may be without special effort or design." General custom, too, dictates this manner of filling the measure in the case of these commodities. Also in a few States the number of cubic inches required to constitute a heaped bushel of one or two specified commodities has been fixed, but these enactments are not uniform one with another.

We find only one decision in the courts which specifies the size of the heaped bushel and this decision is thus of very great interest on account of the broadness of its application. The case in question was decided by the Court of Customs Appeals in February, 1912, and was based upon a dispute as to what constituted a "bushel" of apples under the terms of a tariff law which assessed the duty in terms of "bushels" without descriptive words or without specifying any weight per bushel. The court held that it should be considered that a heaped bushel was referred to since both by custom and by the old English statute quoted above apples have always been required to be so sold; and then after an examination of authorities, decided that a heaped bushel contained 2747.715 cubic inches. This figure is derived by adding to the volume of a struck bushel the volume of a cone having a base diameter of $19\frac{1}{2}$ inches and a height of 6 inches. The $19\frac{1}{2}$ -inch base in the diameter of the Winchester bushel mentioned in the statute quoted above, measured from outside to outside of the measure. This figure makes the heaped bushel about 27.8 per cent larger than the struck bushel. This decision will undoubtedly be followed in customs matters.

The heaped bushel is also commonly defined as 25 per cent larger than the struck bushel, a capacity of about 2686 cubic inches. This calculation is based on a cone of the same height heaped upon the same bushel measure described above, but the cone is considered in this case to be heaped upon the area of the open top of the measure instead of the top including the sides, the diameter thus being $18\frac{1}{2}$ instead of $19\frac{1}{2}$ inches.

Heaped measure is to be used in measuring the more bulky commodities, such as apples, pears, plums, peaches, potatoes, onions, beets, carrots, turnips, etc.

It is at once apparent that the quantity which may be heaped upon a measure will depend very largely on the area of the top of the measure; and so it becomes important that there should be a standard diameter for each size of measure. While, as previously noted, this matter has never been determined by national legislation, the following minimum diameters of cylindrical dry measures of various capacities are approved by the Bureau of Standards, and have also been adopted by the Annual Conference on Weights and Measures:

	Minimum diameter in inches
$\frac{1}{2}$ bushel.....	13 $\frac{3}{4}$
1 peck.....	10 $\frac{7}{8}$
$\frac{1}{2}$ peck.....	8 $\frac{1}{2}$
2 quarts.....	6 $\frac{5}{8}$
1 quart.....	5 $\frac{3}{8}$
1 pint.....	4

Another factor of importance in buying commodities for which bushel weights have been established is the knowledge of whether one may demand, under the laws of this particular State, the weight specified in the law, regardless of whether the commodities are sold by weight or measure. This depends on the phraseology used in the statute in question, and as to this, there is no general uniformity throughout the States. The question is often one of interpretation, and it is rendered more difficult by the fact that few cases are to be found in which the courts have passed upon these laws. However, information is given below as to what is believed to be the force and effect of the statutes.

(a) STATES REQUIRING SALES BY WEIGHT.—Some States have laws requiring that all dry commodities be sold by weight, while others require that those for which a legal weight has been established, be so sold. In the latter class when a unit of dry measure is called for, this must be determined by weight in accordance with the standard schedule of weights per bushel. In some of these States a special contract may be made by the parties, specifying some other method of sale.

The list of States follows: Florida, Idaho, Iowa, Kansas, Massachusetts, Michigan, Nevada, Ohio, Oregon, Utah, and Wisconsin.

In these States purchasers may demand that all orders be actually weighed before delivery, and that full weight as specified in the State law be delivered. It is desirable for purchasers to check the deliveries by weight and compare them with the standard legal weights.

(b) **STATES REQUIRING DEFINITE WEIGHTS.**—In the second class may be grouped a number of States having statutes similar to each other in wording and apparently similar in legal effect. These statutes read somewhat as follows: "The bushel shall consist of or will mean, a stated weight," sometimes with the qualification, "When sold by the bushel." This list includes: California, Delaware, Illinois,¹ Indiana, Kentucky, Minnesota, Missouri, Montana, New Hampshire, New Mexico, New York, North Dakota, Oklahoma, Pennsylvania, South Dakota, Vermont, and Washington.

In these cases it appears to be the clear intent of the legislatures that the weights stated in the laws should be delivered by the dealers, whether the commodities in question are actually weighed or whether they are measured. Therefore, although the purchaser has no legal right to demand that the commodities be weighed by the dealer before delivery, it appears to be perfectly proper to check delivery by weight and to demand that the legal weight be delivered in all cases. As in the first group, some of these States allow the statute to be superseded by special agreement and, therefore, the purchaser should be careful to refrain from any action from which such agreement might be inferred.

(c) **STATES ESTABLISHING LEGAL OR STANDARD WEIGHTS.**—The next group are those States which establish a legal or standard weight per bushel, usually without a provision for a special agreement clause: Alabama, Arkansas, Colorado, Connecticut, Georgia, Louisiana, Maryland, Nebraska, Rhode Island, South Carolina, Tennessee, Texas, and West Virginia.

This list is shown separately from that immediately preceding on account of the distinctive wording of the laws. The meaning is not essentially different and therefore the checking should be done in the same way as is suggested there.

(d) **STATES REQUIRING DEFINITE WEIGHTS FOR SALES BY WEIGHT.**—The States in the next list establish a legal weight for various commodities, but specifically limit it to apply to cases where the sale is actually made upon a basis of weight: District of Columbia,² Maine, Mississippi, New Jersey, North Carolina, and Virginia.

In these States if the purchaser has not demanded that the transaction be upon a weight basis, the purchase must be checked by the use of dry measures.

¹ In some of the cities of Illinois, notably Chicago, the conditions given under the first class of States obtain, on account of a city ordinance to that effect.

² The weight per bushel of potatoes only is established by law in the District.

(e) STATES NOT REGULATING THIS MATTER.—The States of Arizona and Wyoming have no laws establishing standard weights per bushel or requiring sales of dry commodities by weight.

While dry measures appear to be legal in these States, the usual practice is to sell dry commodities by weight and therefore they will usually be checked by weight.

(f) CHECKING DRY COMMODITIES BY DRY MEASURES.—In States of all the above classes if a legal weight for any dry commodity is not established and it is not provided that dry commodities be sold by weight only, the checking must be done by dry measures.

(g) INTERPRETATION OF STATE LAWS.—A legal question is presented whether many of the above laws require for fractional parts of the bushel, such as pecks, quarts, etc., the same fractional parts of the legal weight established. However, a reasonable view of the matter would be that such was the intention of the law. Therefore, when a peck, quart, or other fractional part of a bushel is purchased, the weight calculated by taking the same fractional part of the legal weight per bushel may be used for checking purposes.

In regard to weights per bushel in general, it should be remembered that on account of the variations in the densities of commodities in different localities and in different seasons it is impossible to fix with any degree of certainty the weight of a given volume, and in any event the best figure that could be obtained for any commodity would be the average of all localities for a number of years. This figure is only an approximate one and it may vary considerably from the true weight of a bushel of the commodity at the time of any transaction. Therefore it is important that it be distinctly understood whether a bushel by volume or a bushel by weight is the amount intended to be delivered or received. Since amounts determined by weight are much more nearly accurate than similar amounts attempted to be determined by measure, transactions upon a basis of weight are much to be preferred to those upon a basis of measure, and therefore it is recommended that in so far as possible all purchases and sales be made by weight, as is now the practice in wheat transactions.

Attention is called to the fact that dry commodities have in some localities not infrequently been sold by liquid measure instead of dry measure. This should be guarded against, since a given liquid measure is about 14 per cent smaller than the corresponding dry measure.

It does not appear to be generally known, and the fact may be of sufficient interest to justify a statement in this place, that the British imperial bushel is about 3 per cent larger than the United States standard bushel. The former contains 2219.36 cubic inches, and is defined as the volume of 80 pounds of pure water, at 62° F, when weighed against brass weights in air at a pressure of 30 inches of mercury; while the latter measure, as before stated, contains 2150.42 cubic inches.

The following tables cover all available legislation in relation to weights per bushel up to and including the 1916-17 legislative term.

II. COMMODITIES FOR WHICH BUSHEL WEIGHTS HAVE BEEN ESTABLISHED IN NOT MORE THAN THREE STATES

- BEANS, pole, 50 pounds (Nebraska).
- BEANS, shell, 28 pounds (Maine, Massachusetts, and Vermont).
- BEANS, velvet, in hull, 78 pounds (Florida).
- BEANS, wax, 24 pounds (Illinois).
- BEETS, sugar, 60 pounds (Connecticut and Maine).
- BEETS, turnip, 60 pounds (Maine).
- BEGGARWEED SEED, 62 pounds (Florida).
- BERMUDA GRASS SEED, 40 pounds (New Mexico and Oklahoma), 14 pounds (North Carolina).
- BLACKBERRIES, dried, 28 pounds (North Carolina, South Carolina, and Tennessee).
- BLUEBERRIES, 42 pounds (Maine and West Virginia).
- BROMUS INERMUS, 14 pounds (Iowa, Nebraska, and North Dakota).
- CANTALOUPE MELON, 50 pounds (North Carolina, South Carolina, and Tennessee).
- CHUFAS, 54 pounds (Florida).
- CLOVER, alsike (or Swedish), 60 pounds (Maryland, Oklahoma, and Wisconsin).
- CLOVER, burr, 8 pounds (North Carolina). (This is for seed in the burr.)
- CLOVER, German, 60 pounds (North Carolina). (This is also more commonly known as "crimson clover.")
- CLOVER, Japan, Lespedeza, in hulls, 25 pounds (North Carolina).
- CLOVER (seed), sweet, unhulled, 33 pounds (Illinois).
- CORN, green, with shucks, 100 pounds (South Carolina and Tennessee).
- CULM, 80 pounds (Maryland).
- DANDELIONS, 12 pounds (Maine, Massachusetts, and Vermont).
- FEEB, 50 pounds (Maine and Massachusetts).
- FETERITA, 56 pounds (Kansas).
- GRASS SEED, all meadow and fescue except tall, 14 pounds (North Carolina).
- GRASS SEED, Italian rye, 20 pounds (North Carolina, South Carolina, and Tennessee).
- GRASS SEED, Johnson, 28 pounds (Arkansas); 25 pounds (North Carolina).
- GRASS SEED, perennial rye, 14 pounds (North Carolina).
- GRASS SEED, tall meadow and tall fescue, 24 pounds (North Carolina).
- GRASS SEED, velvet, 7 pounds (North Carolina, South Carolina, and Tennessee).
- GREENS, beet, 12 pounds (Maine, Massachusetts, and Vermont).
- GUAVAS, 54 pounds (Florida).
- INDIA WHEAT, 46 pounds (Vermont). (This is a species of buckwheat.)
- LAND PLASTER, 100 pounds (North Carolina, South Carolina, and Tennessee).
- LENTILS, 60 pounds (Pennsylvania and Federal Statutes).

- MANGELWURZEL, 60 pounds (Connecticut and Maine).
MEAL, except oatmeal, 50 pounds (Maine and Massachusetts).
MIDLINGS, coarse, 30 pounds (Indiana).
MILO MAIZE, 56 pounds (Kansas).
MUSTARD SEED, 58 pounds (North Carolina).
PARSLEY, 8 pounds (Maine, Massachusetts, and Vermont).
PEANUTS, Spanish, 30 pounds (North Carolina and Virginia).
PEACH SEED, 50 pounds (North Carolina).
PEARS, dried, 26 pounds (North Carolina, South Carolina, and Tennessee).
PEAS, black-eye and other cowpeas, 60 pounds (Virginia); cowpeas, 60 pounds (Indiana and Maryland).
PIEPLANT, 50 pounds (North Carolina, South Carolina, and Tennessee).
POPPY SEED, 47 pounds (Federal Statutes).
RADISH SEED, 50 pounds (Iowa and South Dakota).
RHUBARB, 50 pounds (Minnesota).
ROOT CROPS (not otherwise specified), 50 pounds (Iowa and Nebraska).
SAGE, 4 pounds (North Carolina, South Carolina, and Tennessee).
SALADS, mustard, spinach, kale, and turnips, 10 pounds (North Carolina); 30 pounds (South Carolina and Tennessee).
SUGAR CANE (amber), 57 pounds (New Jersey).
SUNFLOWER SEED, 24 pounds (North Carolina).
TEOSINTE, 59 pounds (North Carolina).

III. COMMODITIES FOR WHICH BUSHEL WEIGHTS HAVE BEEN ESTABLISHED IN MORE THAN THREE STATES

	Alfalfa seed	Apples ^a	Apples, dried	Apple seeds	Barley	Beans									
						Beans ^a	Castor	Green (unshelled)	Green or string	Lima	Scarlet runner pole	Soy	White	White runner pole	Windsor (broad)
Federal Statutes.....		b 50			48	60	50								
Alabama.....			24		47	60									
Arizona.....															
Arkansas.....		c 50	24		48								60		
California.....					50										
Colorado.....					48	60									
Connecticut.....		48	25		48	60									
Delaware.....															
District of Columbia.....															
Florida.....		c 48	24		48	d 60	d 48								
Georgia.....			24		47								60		
Hawaii.....					48										
Idaho.....	60	c 48	24		48	60	46								
Illinois.....	60	c 50	24		48		46		24				60		
Indiana.....	60	48	25		48	60						60			
Iowa.....	60	48	24		48	e 60	d 50	56		56					
Kansas.....	60	50	24		48	60	46	38							
Kentucky.....	60		24		47		45						60		
Louisiana.....					32										
Maine.....	60	44	25		48	60			24	56	50	58		50	47
Maryland.....	60	e 50	28		48	e 60	f 50								
Massachusetts.....		48	25		48	60			24	56	50	58		50	47
Michigan.....		48	22		48	60	46								
Minnesota.....	60	c 50	28		48	60				56	50			50	47
Mississippi.....			26		48		46						60		
Missouri.....		48	24		48	60	46	56							
Montana.....		45			48	60									
Nebraska.....	60	c 48	24		48	60	46	56		56					
Nevada.....	60	c 48	24		48	60	46								
New Hampshire.....		48	25		48							58	60		
New Jersey.....		50	25		48	60									
New Mexico.....	60	45	24		48	60	46								
New York.....		48	25		48	60									
North Carolina.....	60	c 48	24	40	48	g 60	46	30				60			
North Dakota.....		50			48	60									
Ohio.....		48	24		48	60									
Oklahoma.....	60	48	24		48	60	46								
Oregon.....		45	28		46										
Pennsylvania.....	60	45	25		47	c 60	d 46								
Rhode Island.....		48	25	40	48	60	46								
South Carolina.....		c 50	24	40	48	e 60	46	30							
South Dakota.....	60	48	24		48	60	46	50							
Tennessee.....		c 50	24	40	48	e 60	46	30							
Texas.....		45	28		48								60		
Utah.....															
Vermont.....	60	48			48	60			24						
Virginia.....	60		28		48	f 60	46								
Washington.....		c 45	28		48										
West Virginia.....		c 50	24		48	h 60	46								
Wisconsin.....	60	44	25		48	60	46			56					
Wyoming.....															

^a Not defined.^b Green or ripe.^c Green apples.^d Shelled.^e Dried.^f Called "Castor beans or seed" in the law.^g Dry.^h Dry and shelled.ⁱ Navy and soja.

III. Commodities for which bushel weights have been established in more than three States—Continued

	Bees	Blackberries	Blue-grass seed	Blue-grass seed (English)	Bran	Broom-corn seed	Buckwheat	Cabbage	Canary seed	Carrots	Cement	Charcoal	Cherries		
													Cherries ^a	With stems	Without stems
Federal Statutes							48						b 50		
Alabama															
Arizona															
Arkansas			14		20	48	52								
California							40								
Colorado			14				52								
Connecticut					20		48			50		c 20			
Delaware												c 20			
District of Colum- bia															
Florida					20										
Georgia			14		d 20		52								
Hawaii															
Idaho	56		14	22	20		50			50					
Illinois	60		14		20	48	52			50		20			
Indiana	60		14		20		50			50		20			
Iowa	56		14		20	50	48			50		20	40		
Kansas	60		14	22		30	48			50				56	64
Kentucky			14	14	20		56								
Louisiana															
Maine	60	40			20		48			50					
Maryland			14		20		48			50					
Massachusetts	60				20		48			50					
Michigan			14				48								
Minnesota	50		14			57	50			45					
Mississippi			14		20		48								
Missouri			14		20		52			50					
Montana	50		14		20		52			50					
Nebraska	56		14	22	20	50	50					20	40		
Nevada	56		14	22	20		50			50					
New Hampshire	60				20		48			50					
New Jersey	60						48			50					
New Mexico	56		14		20		52			50	80	20			
New York					20		48			50					
North Carolina	50	48	14		20	44	50	50	60	50	80	22		56	64
North Dakota	60				20	30	42								
Ohio	56					45	50			50					
Oklahoma			14		20		48			50					
Oregon							42								
Pennsylvania	56		14		20	50	48	50		50	100	20		56	64
Rhode Island	50				20		48			50		20			
South Carolina	50	48	14		20	42	50	50	60	50	80	22		56	64
South Dakota	56	30	14		20	50	52		50	50		20	40		
Tennessee	50	48	14		20	42	50	50	60	50	80	22		56	64
Texas					20		42					22			
Utah															
Vermont	60						48			50		20			
Virginia			14		20		48								
Washington							42								
West Virginia			14		20	57	52					20			
Wisconsin	50		14		20		50			50					
Wyoming															

^a Not defined.^b Green or ripe.^c Commercially dry.^d Wheat bran.

III. Commodities for which bushel weights have been established in more than three States—Continued

	Chestnuts	Clover seed	Coal					Coke	Corn, including Indian corn or maize						
			Coal ^a	Anthracite	Bituminous	Mineral	Stone		Cracked	In the ear	In the ear, husked	In the ear, unhusked	Popcorn (in ear)	Popcorn (shelled)	Sweet
Federal Statutes..															
Alabama										70		75		^b 56	
Arizona														^b 56	
Arkansas		60									70	74		^b 56	
California														^b 52	
Colorado		60				80				70				^b 56	
Connecticut		60		80										^b 56	
Delaware														^b 56	
District of Columbia															
Florida												70		^b 56	
Georgia		60					80			70				^b 56	
Hawaii										70				^b 56	
Idaho		60								70				^b 56	
Illinois		60	80					40		^(c) 70			70	^b 56	
Indiana		60				80		40		^(c) 70				^b 56	
Iowa		60	80					40		^d 70		^d 75	70	^b 56	50
Kansas		60									70		70	^b 56	
Kentucky		60	^e 76							^f 70				^b 56	
Louisiana														^b 56	
Maine		60							50					^b 56	
Maryland		60	80							70				^b 56	
Massachusetts		60							50					^b 56	
Michigan		60				80				70				^b 56	
Minnesota	50	60								70				^b 56	48
Mississippi		60					80			72				^b 56	
Missouri		60			80					70				^b 56	
Montana		60			76					70				^b 56	
Nebraska		60	80					40		70			70	^b 56	50
Nevada		60								70				^b 56	
New Hampshire		60							50					^b 56	
New Jersey		60												^b 56	
New Mexico		60			80			40		70		72	70	^b 56	
New York		60												^b 56	
North Carolina	50	^g 60					80	40		70	70	74	^h 70	^b 56	
North Dakota		60					80			70				^b 56	
Ohio		60	ⁱ 70		80			40		68			42	^b 56	^j 45
Oklahoma		60				80				70		72		^b 56	
Oregon		60												^b 56	
Pennsylvania	^k 50	60		75	76		80	40			70			^b 56	
Rhode Island		60	80					40		70				^b 56	
South Carolina	50	^g 60					80	40		70	70	ⁱ 74	^h 70	^b 56	
South Dakota		60					80	38		70			70	^b 56	50
Tennessee	50	^g 60					80	40		70	70	ⁱ 74	^h 70	^b 56	
Texas		60					80				70	72		^b 56	
Utah														^b 56	
Vermont	50	60								70	70	72		^b 56	
Virginia	57	60		80						70				^b 56	
Washington		60												^b 56	
West Virginia		60	80					40		^m 68				^b 56	
Wisconsin		60												^b 56	
Wyoming															

^a Not defined.^b Not stated whether shelled or unshelled, but presumed from the weight shown to be shelled.^c Corn in the ear, 70 pounds until Dec. 1 next after grown; 68 pounds thereafter.^d Field corn.^e "Stone coal"; the term includes anthracite, cannel, bituminous, and other mined coal.^f Corn in the ear, 70 pounds from Nov. 1 to May 1 following, and from May 1 to Nov. 1 following, 68 pounds.^g Red and white.^h Not stated whether in the ear or not, but from the weight shown it is presumed to be in the ear.ⁱ Cannel coal.^j Shelled.^k Hulled.^l Corn, green, with shucks, 100 pounds per bushel.^m In ear, dry; in ear, green, 72 pounds.

III. Commodities for which bushel weights have been established in more than three States—Continued

	Corn meal (including Indian meal)			Cotton seed			Cranberries	Cucumbers	Currants	Emmer ^b	Flaxseed (linseed)	Gooseberries	Grapes ^a	Grapes (with stems)	Grapes (without stems)
	Corn meal ^c	Corn meal, bolted	Corn meal, unbolted	Cotton seed ^a	Sea Island cotton seed	Upland cotton seed									
Federal Statutes.....											56				
Alabama.....		46	48	32											
Arizona.....															
Arkansas.....	48			33½							56				
California.....															
Colorado.....	50														
Connecticut.....	50				44	30					55				
Delaware.....		44	48												
District of Columbia.....															
Florida.....	48			32	44										
Georgia.....		48	48	30							56				
Hawaii.....															
Idaho.....	48										56				
Illinois.....	48		48	32			33	48		40	56	40			
Indiana.....	50						33	48			56	40			
Iowa.....	48							48			56			40	
Kansas.....								48		40	56			48	60
Kentucky.....	50										56				
Louisiana.....															
Maine.....	50			44	30	32			40		56				
Maryland.....	48										56				
Massachusetts.....	50			44	30	32					55				
Michigan.....	50					40					56				
Minnesota.....						36	48				56				
Mississippi.....	48	44	48	32							56				
Missouri.....					33			48			56				
Montana.....	50										56				
Nebraska.....	50									48	56				
Nevada.....	48										56			40	
New Hampshire.....	50					32					56				
New Jersey.....											55				
New Mexico.....	50			32				48			56				
New York.....	50				44	30					55				
North Carolina.....				30	44			48			56	48		48	60
North Dakota.....											56				
Ohio.....	48										56		48		
Oklahoma.....	50			32				48			56				
Oregon.....															
Pennsylvania.....	50						40	50	40		56	40	48		
Rhode Island.....	50				44	30					56				
South Carolina.....		50	48	c 30				48			56	48		48	60
South Dakota.....	50							48	40		56	40	40		60
Tennessee.....		50	48	28				48			56	48		48	60
Texas.....				32							56				
Utah.....															
Vermont.....	50						32	48			55				
Virginia.....	48			30							56				
Washington.....															
West Virginia.....	48					36	d 50		40		56	40			
Wisconsin.....	50			44	30	35	d 50				56				
Wyoming.....															

^a Not defined.^b See also "Spelt or speltz."^c Cotton seed, long staple, 40 pounds per bushel.^d Green.

III. Commodities for which bushel weights have been established in more than three States—Continued

	Hair, plastering ^a	Hair, plastering (unwashed)	Hair, plastering (washed)	Hempseed	Herds grass	Hickory nuts	Hominy	Horsradish	Hungarian grass seed	Kafir corn	Kale	Lime ^a	Lima, unslacked	Malt	Millst	Millst, Japanese barnyard
Federal Statutes..														b 34		
Alabama.....																
Arizona.....																
Arkansas.....															50	
California.....																
Colorado.....				44								80				
Connecticut.....					45						70					
Delaware.....																
District of Columbia.....																
Florida.....															50	
Georgia.....	8			44									80			
Hawaii.....																
Idaho.....		8	4	44					50	56		80	80	32	50	
Illinois.....		8	4	44		50			50	56		80		38	50	35
Indiana.....				44	45	50			50	56				c 35	50	
Iowa.....				44		d 50			50	56		80			50	
Kansas.....		8	4	44		50				56			80	38	e 50	
Kentucky.....		8		44					50				35		50	
Louisiana.....																
Maine.....	f 11			44	45				48	12	70				50	35
Maryland.....				44	45				50			80		b 34	g 50	
Massachusetts.....					45						12	70				35
Michigan.....				44					50						50	
Minnesota.....			8	4		50			48			80			48	
Mississippi.....				44					50				80	38	50	
Missouri.....									48					38	50	
Montana.....				44					50			80		30		
Nebraska.....		8	4	44		d 50				56		80		32	50	
Nevada.....				48					50	56				32	50	
New Hampshire.....					45							70				35
New Jersey.....																
New Mexico.....				44					50	56			80		50	
New York.....					45							70				
North Carolina.....	8			44		h 50	62	50	48	50	10	i 40	80		50	
North Dakota.....												80			50	
Ohio.....				44		50	60		50	56		70		34	50	
Oklahoma.....				44					48	56				38	50	
Oregon.....																
Pennsylvania.....	8			44	45	50	60	50	50	56		80		38	50	
Rhode Island.....				44					50			70		38	50	
South Carolina.....	8			44		50	62	50	48		30	i 40	80	j 50		
South Dakota.....				44		50			50	56		80			50	
Tennessee.....	8			44		50	62	50	48		30	i 40	80	j 50		
Texas.....				44					48						50	
Utah.....					45				50	56					50	
Vermont.....									48				80	38	50	
Virginia.....	8			44												
Washington.....																
West Virginia.....				44		50			50			70		34	50	
Wisconsin.....	8			44		50			48			70	80	b 34	50	
Wyoming.....																

^a Not defined.^b Barley malt.^c Rye malt.^d Hulled.^e Hungarian.^f Well dried and cleaned.^g German and American.^h Without hulls.ⁱ Slacked.^j German, Missouri, and Tennessee.

III. Commodities for which bushel weights have been established in more than three States—Continued

	Oats	Onions			Orchard grass seed	Osgae orange seed	Parsnips	Peaches				Peanuts (or "Ground peas")	Pears
		Onions	Bottom onion sets	Top onion sets				Peaches	Dried	Dried (peeled)	Dried (unpeeled)		
Federal Statutes	32							^a 50					^a 50
Alabama	32									38	33		
Arizona													
Arkansas	32	57			14				33				
California	32												
Colorado	32	57											
Connecticut	32	52					45		33				
Delaware													
District of Columbia													
Florida	32	56						^b 54	24			22	55
Georgia	32	57								38	33	25	
Hawaii	32												
Idaho	32	57					50	48	33				
Illinois	32	57	32	30	14	33	50	48	33			^c 20	58
Indiana	32	57			14		55	48	33				50
Iowa	32	52	32	28	14	32	45	48	33			22	45
Kansas	32	57					48	48	33				45
Kentucky	^d 32	57	36		14				39			24	
Louisiana	32												
Maine	32	52			14		45	48	33			^c 20	58
Maryland	32	54			14								
Massachusetts	32	52					^e 40					22	
Michigan	32	54			14	33	45	48	33			^c 20	58
Minnesota	32	52	32	28	14		42	48	28			22	45
Mississippi	32	57							33			24	
Missouri	32	57		28	14	36	44	48	33				48
Montana	32	57					50						45
Nebraska	32	57	32	28	14		50	48	33			22	45
Nevada	32	57					50	48	33				
New Hampshire	32	52					45	48	33			^c 20	58
New Jersey	32	57								33	33		
New Mexico	32	57	32	30	14		42	48	33			22	48
New York	32	57							33				
North Carolina	32	^f 57	32	28	14	33	50	^f 50	25			22	^f 56
North Dakota	32	52											
Ohio	32	56		^g 28			50	48	33				
Oklahoma	32	57		28	14	36	44	48	33			22	48
Oregon	32								28				45
Pennsylvania	32	50		^g 28	14		50	48		38	33	22	50
Rhode Island	32	50					50	48	33				
South Carolina	32	^f 56	^g 32	28	14	33	50	^f 50	25			23	^f 36
South Dakota	32	57	32	30	14	32	42	48	33			20	
Tennessee	32	^f 56	^g 32	28	14	33	50	^f 50	26			23	^f 56
Texas	32	57						50	28				
Utah													
Vermont	32	52					45	48				^c 20	58
Virginia	32	57			14		50			40	32	^h 22	
Washington	32								28				^b 45
West Virginia	32	55			14		42	48	33				
Wisconsin	32	50	^g 32				44	48	33				48
Wyoming													

^a Green or ripe.^b Green.^c Roasted; green, 22 pounds.^d Shelled.^e Peaches, peeled; unpeeled, 32 pounds.^f Matured.^g Not stated whether top or bottom sets.^h Virginia peanuts.

III. Commodities for which bushel weights have been established in more than three States—Continued

	Peas				Plima	Potatoes (Irish)	Potatoes, sweet	Quinces	Rapeseed	Raspberries	Red top	Rice corn	Rice, rough (or unhulled)	Rutabagas	Rye	Rye meal
	Peas ^a	Green, unshelled	Split pea	Wrinkled												
Federal statutes	b 60		60		c 50	60		c 50							56	
Alabama	60					60	55								56	
Arizona						60	50				14				56	
Arkansas	60														56	
California															54	
Colorado						60									56	
Connecticut	60					60	54						45	60	56	50
Delaware																
District of Columbia						60										
Florida					40	60	56	48							56	
Georgia	60					60	55						43		56	
Hawaii	d 60														56	
Idaho	d 60					60	50					56			56	
Illinois	e 60	32				60	50	48	50		14		45	50	56	50
Indiana						60	50	48	50		14		45		56	
Iowa	e 60	50			48	60	50	48	50		14			60	56	
Kansas	60	56			52	60	50	48				56		50	56	
Kentucky	60					60	55								56	
Louisiana															56	
Maine	60	28		56		60	54	48		40	14		44	60	56	50
Maryland	e 60					60	60		50		14				56	
Massachusetts	h 60	28		56		60	54	48					44		56	50
Michigan	60				e 28	60	56				14				56	
Minnesota	h 60			56		60	55		50		14			52	56	
Mississippi	60					60	54								56	
Missouri	60	56	60			60	56				14			50	56	
Montana	60					60									56	
Nebraska	d 60	50		56	48	60	50	48	50		14			60	56	
Nevada	d 60					60	50					56			56	
New Hampshire	60					60	54	48				56			56	50
New Jersey	60					60	54								56	
New Mexico	60					60	50	48	50					50	56	
New York	60					60	54						45		56	50
North Carolina	j 60	30			64	56	56	48		48	14		44		56	
North Dakota	60					60	46								56	
Ohio	60				50	60	50								56	
Oklahoma	60	56	60			60	55		50		14			50	56	
Oregon	60					60									56	
Pennsylvania	e 60	56			54	60	54	48	50	48	14		45	60	56	50
Rhode Island	60		60			60	54								56	50
South Carolina	j 60	m 30			64	60	50	48		48	14				56	
South Dakota	60	50				60	46	48	50	32	14			50	56	
Tennessee	j 60	30			64	60	50	48		48	14				56	
Texas																
Utah						60	55								56	
Vermont	60	28			48	60	54	48			14				56	
Virginia						60	56				40				56	
Washington						60									56	
West Virginia	j 60					60	50		50		14				56	
Wisconsin	60			56		60	54		50		14		45	56	56	50
Wyoming											14					

^a Not defined.^b Green or dried.^c Green or ripe.^d Shelled, dried peas.^e Dried.^f Sweet potatoes, seed, sorted, $1\frac{1}{2}$ inches diameter and under, 45 pounds.^g Red top grass seed (chaff); fancy, 32 pounds.^h Smooth peas.ⁱ Red top seed.^j Dry.^k Matured.^l Seed.^m Not stated whether shelled or unshelled.

III. Commodities for which bushel weights have been established in more than three States—Continued

	Salt			Sand	Shorts	Sorghum seed	Speltz or speltz ^a	Spinach	Strawberries	Timothy seed	Tomatoes	Turnips	Common English turnips	Walnuts	Wheat
	Salt	Coarse salt	Fine salt												
Federal Statutes.....															60
Alabama.....												55			60
Arizona.....															60
Arkansas.....	50					50				60		57			60
California.....															60
Colorado.....	80									45					60
Connecticut.....		70	50		20					45			50		60
Delaware.....															60
District of Columbia.....															60
Florida.....	60					56						54			60
Georgia.....										45		55			60
Hawaii.....															60
Idaho.....	80					50				45	56	55			60
Illinois.....		55	50		20	50	40	12		45	56	55		50	60
Indiana.....		50	55			50				45	60	55		50	60
Iowa.....	80			130	20	^b 50	40			45	50	55		^c 50	60
Kansas.....	80					50	40	30		45	56	55		^d 50	60
Kentucky.....	50		55							45		60			60
Louisiana.....															60
Maine.....		^e 70	^f 60			50		12	40	45	56		50		60
Maryland.....		70	56			50				45	60	60			60
Massachusetts.....		70	70		20			12		45	56	55			60
Michigan.....	^e 56					57	40			45		58			60
Minnesota.....						42				45	50	55		50	60
Mississippi.....	50									45		55			60
Missouri.....	50					42				45	45	^h 42			60
Montana.....	50									45	50	50			60
Nebraska.....	80				20	50	48			45	56	55		^e 50	60
Nevada.....	80					50				45	56	56			60
New Hampshire.....		70	50		20					45	56	55			60
New Jersey.....				130		50				45					60
New Mexico.....		70	56		20					45	50	56			60
New York.....										45					60
North Carolina.....	50					50		10	48	45	56	50		^e 50	60
North Dakota.....	80						40			45		60			60
Ohio.....						50				45	56	60		ⁱ 50	60
Oklahoma.....	80					50				45	45	^h 42			60
Oregon.....															60
Pennsylvania.....	^j 62	85		100	20	50	40		48	45	60	60		^h 50	60
Rhode Island.....		70	50		20					45	56	50			60
South Carolina.....	50					50		30	48	45	56	50		50	60
South Dakota.....	80			130		50	40		32	45	50	55		50	60
Tennessee.....	50					50		30	48	45	56	50		50	60
Texas.....	50									45	55	55			60
Utah.....															60
Vermont.....		70	56					12		45	56	60			60
Virginia.....	50									45	60	55			60
Washington.....															60
West Virginia.....		70	50			57				45	56				60
Wisconsin.....		70	50		20					45	56	42			60
Wyoming.....															60

^a See also "Emmer." Spring emmer has frequently been erroneously called speltz, this name being a misspelling of spelt, which is a distinct crop. The differences between spelt and emmer are pointed out in U. S. Dept. Agr. Farmers' Bulletin 466.

^b Sorghum saccharatum seed.

^c Hulled.

^d Black.

^e Turk's Island salt or other grades of coarse salt.

^f Liverpool salt or other grades of fine salt.

^g Michigan salt.

^h Common.

ⁱ Domestic.

^j Ground.

IV. BUSHEL WEIGHTS (FOUND IN THE PRECEDING PAGES) WITH CORRESPONDING PROPORTIONAL WEIGHTS FOR VARIOUS SUBDIVISIONS OF THE BUSHEL

Bushel weight in pounds	One-half bushel		One peck		One-half peck		One-quarter peck		One quart	
	Lbs.	Ozs.	Lbs.	Ozs.	Lbs.	Ozs.	Lbs.	Ozs.	Lbs.	Ozs.
4.....	2	0	1	0	0	8	0	7	0	2
8.....	4	0	2	0	1	0	0	8	0	4
10.....	5	0	2	8	1	4	0	10	0	5
11.....	5	8	2	12	1	6	0	11	0	5.5
12.....	6	0	3	0	1	8	0	12	0	6
14.....	7	0	3	8	1	12	0	14	0	7
20.....	10	0	5	0	2	8	1	4	0	10
22.....	11	0	5	8	2	12	1	6	0	11
23.....	11	8	5	12	2	14	1	7	0	11.5
24.....	12	0	6	0	3	0	1	8	0	12
25.....	12	8	6	4	3	2	1	9	0	12.5
26.....	13	0	6	8	3	4	1	10	0	13
28.....	14	0	7	0	3	8	1	12	0	14
30.....	15	0	7	8	3	12	1	14	0	15
32.....	16	0	8	0	4	0	2	0	1	0
33.....	16	8	8	4	4	2	2	1	1	0.5
34.....	17	0	8	8	4	4	2	2	1	1
35.....	17	8	8	12	4	6	2	3	1	1.5
36.....	18	0	9	0	4	8	2	4	1	2
38.....	19	0	9	8	4	12	2	6	1	3
39.....	19	8	9	12	4	14	2	7	1	3.5
40.....	20	0	10	0	5	0	2	8	1	4
42.....	21	0	10	8	5	4	2	10	1	5
43.....	21	8	10	12	5	6	2	11	1	5.5
44.....	22	0	11	0	5	8	2	12	1	6
45.....	22	8	11	4	5	10	2	13	1	6.5
46.....	23	0	11	8	5	12	2	14	1	7
47.....	23	8	11	12	5	14	2	15	1	7.5
48.....	24	0	12	0	6	0	3	0	1	8
50.....	25	0	12	8	6	4	3	2	1	9
52.....	26	0	13	0	6	8	3	4	1	10
54.....	27	0	13	8	6	12	3	6	1	11
55.....	27	8	13	12	6	14	3	7	1	11.5
56.....	28	0	14	0	7	0	3	8	1	12
57.....	28	8	14	4	7	2	3	9	1	12.5
58.....	29	0	14	8	7	4	3	10	1	13
60.....	30	0	15	0	7	8	3	12	1	14
62.....	31	0	15	8	7	12	3	14	1	15
64.....	32	0	16	0	8	0	4	0	2	0
68.....	34	0	17	0	8	8	4	4	2	2
70.....	35	0	17	8	8	12	4	6	2	3
72.....	36	0	18	0	9	0	4	8	2	4
74.....	37	0	18	8	9	4	4	10	2	5
75.....	37	8	18	12	9	6	4	11	2	5.5
76.....	38	0	19	0	9	8	4	12	2	6
80.....	40	0	20	0	10	0	5	0	2	8
85.....	42	8	21	4	10	10	5	5	2	10.5
100.....	50	0	25	0	12	8	6	4	3	2
130.....	65	0	32	8	16	4	8	2	4	1



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Legal weights (in pounds) per bushel of



3 1924 002 978 348 man

